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21 January 2000

Mr. Jon Peterson, SR-6J
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U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60604

U.S. EPA Contract No.	68-W7-0026
Work Assignment No.	003-ROBF-05AN
Document Control No.	RFW003-3A-AEKK
Subject:	Review of Remedial Action Report Albion-Sheridan Township Landfill (ASTL) Site Calhoun County, Michigan

Dear Mr. Peterson:

Roy F. Weston, Inc. (Weston) is pleased to submit the following letter report reviewing the Remedial Action Report (RAR) for the Albion-Sheridan Township Landfill (ASTL). The RAR was submitted to the U.S. EPA on 9 December 1999 by URS Greiner Woodward Clyde (URSGWC).

The Weston report evaluates the consistency between the Woodward Clyde Final Design Report (August 1997) and the RAR as well as any deviations from the plans and specifications listed in the above reports. For convenience, this letter follows the organizational structure of the sections listed in the RAR. For clarity, our comments are divided into general comments and specific comments.

GENERAL COMMENTS

In general, the remedial activities were conducted in substantial accordance with the plans and specifications set forth in the Construction Quality Assurance Plan, Final Design Report, and RAR for the ASTL.

SPECIFIC COMMENTS

Section 2.1.1. List of Contractors and Subcontractors: The list is incomplete. It should include the names of the following contractors and subcontractors:

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- Hendrickson Trucking and Carr Brothers for delivery of topsoil.
- Inland Waters for the removal and transport of hazardous solids to Belleville, Michigan.
- L.W.D., Inc. for the removal and transport of two 55-gallon drums to Calvert City, Kentucky.
- Quanterra Laboratory (of North Canton, Ohio) for the analysis of soil samples from the UST removal activities.
- EC (of Toledo, Ohio) for flash point analysis of 55-gallon drum contents.

Section 2.1.2. Drum Removal: Pictures or diagrams depicting the drum removal activities are needed to document the actual drum removal area. The report specifies that the removal area was larger than originally specified, but does not clearly explain the precise extent of the enlargement. Diagrams of the drum staging area are likewise needed. A statement or diagram depicting the location of reburied non-hazardous drums within the landfill may be of assistance at a later date if follow-up action is ever needed.

Section 2.1.3. Site Preparation Work: The site preparation work included the removal of two underground storage tanks (USTs). No record of disposal for the USTs or documentation of placement of the UST carcasses within the landfill is provided in the RAR. Closure documentation (Site Assessment Report, Closure Report) and any correspondence (closure approval) with the Michigan Department of Environmental Quality - Storage Tank Division (MDEQ-STD) for the USTs should be included within an Appendix.

Also, this section of the RAR indicates that Appendix B contains boring and installation logs for monitoring wells installed during site preparation activities. We concur that the logs are needed; however, the promised logs appear to be missing from the Appendix.

Section 2.1.4. Waste Consolidation: This section of the RAR summarizes waste consolidation efforts, but omits key items. First, the RAR lacks a diagram depicting the elevation of waste before cover layer application. Second, the RAR fails to report the total volume of waste displaced during this activity. (The Final Design ASTL reported displacement of an estimated 50,000 cubic yards.)

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Section 2.1.5. Summary of Cap Construction: This section presents a summary of cap construction. The text within the RAR states that a "six-inch layer of fill was placed over the waste to cover the waste and shape the base grade to the design line and slopes and provide a base for the cap construction." Despite such precise, quantitative terms, no survey information from MEC was provided within the report for this layer or other layers (e.g., upper 6-inch fill layer, 18-inch fill layer). Such information, if provided, could be used verifying that the cap was constructed to with the intended geometry.

Section 2.1.8. Fencing: The text fails to mention a third entrance along the north side of the site. A completion date for fencing installation should also be noted within the section, as problems with the fence were noted during the Final Inspection.

Section 2.1.9. Air Monitoring: The text indicates that air monitoring test results are presented in Appendix C. No such information is provided in Appendix C.

Section 2.1.10. Final Construction Schedule: The section cross-references to a schedule in Appendix D. The schedule provided in Appendix D, however, was never updated for activities such as seeding and fencing.

Section 2.1.11. Chemical Laboratory Analysis: The section lacks a summary of findings and a table listing constituent concentrations relative to state and federal criteria.

Section 2.2.1. Discovery of Stained Soil: This section discusses a Bill of Lading that was used to document disposal of stained soils. A comment regarding the location of the remaining stained soil at the site is necessary. This section cross-references Appendix G for the daily construction reports, but reports for work performed from 10 September 1999 to the final day are missing.

Section 2.2.5. Northwest Corner Seep Area: This section does not reveal all pertinent information. A discussion of the sampling results (seep material) and the change in color and consistency with time of the seep material would be appropriate.

Section 2.2.6. Flexible Membrane Liner (FML) Anchor Trench Alignment: Discussions with Mr. Mike Geiser of OHM (construction contractor) in July 1999 indicated that the information is only partially correct. Mr. Geiser explained to us that all waste encountered along the eastern anchor trench was removed and placed within the landfill. We concur with the prudence of doing so, and



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we believe that the removal and placement should be documented. A diagram or picture depicting the additional areas covered due to the discovery of waste would be appropriate.

Section 2.2. Construction Issues: WESTON believes that certain additional construction issues not discussed in Section 2.2 deserve attention in the RAR:

- Heavy rainfall at one point in the construction that resulted in severe erosion along the slopes of the landfill surface, accumulation of runoff water within the east and west borrow pits, and the removal of runoff water from the east borrow pit to off-site locations.
- Potential medical waste at the ASTL discovered during waste consolidation activities.
- Runoff water from permanent barrel storage area released to outside area during times of heavy rainfall. Discuss the disposal of liner and soil from the permanent barrel storage area after removal of barrels.
- The rejection of stone material (based on fine-grained material content) that was once provided for use within the passive gas collection.
- The modification of the southwest rip-rap drainage chute.

Section 2.3. Prefinal and Final Inspections: The text should include a discussion involving the resolution of items discussed during the inspections. Key items included the gap between the fence and grade, and the need for erosion-control fabric installation along northwest berm.

Section 3.1. Summary of Specification Changes: The text presents an incomplete summary of specification changes. Additions to the specification changes should include:

- Specification 02778 - The FML panels were not installed parallel to slope on the north side of landfill cell.
- Specification 02211 - Waste consolidation not completed within the 10-day period as specified. Also, a daily cover layer over waste was not applied at the end of each day of waste consolidation.

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- Specification 02715 - HDPE pipe installation (passive landfill gas venting system) was completed without pipe welding as specified.

Section 4.3.7. Textured and Smooth Flexible Membrane Liner (TFML): The specifications for the FML described in the RAR differs from the specifications described in the URSGWC Final Design Report (Specification 02278). An additional parameter (Residual Interface Friction Angle with Ottawa Sand) is listed in the Final Design Report. The change in required testing should be noted.

Appendix J. Revised Specifications: The As-Built drawing provided by GSE does not appear to define the as-built conditions of the FML liner at the site. We are especially concerned about the poor depiction of patch areas, as those areas would be more likely than most to require attention in the future. Quality Assurance and Quality Control information compiled by URSGWC relating to the FML liner should be provided for comparison within the RAR.

Should you have any questions or require additional clarification, please feel free to contact me at (847) 918-4005.

Very truly yours,

ROY F. WESTON, INC.

Deepak L. Bhojwani, E.I.T.
Site Manager

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